

IN THE CLAIMS

Please cancel original claims 24 and 29-38, without prejudice or disclaimer.

Please amend claims 1, 3-6, 9, 11, 12, 17, 18, 20-23, 25-28, and 40 to read as follows:

1. (Presently Amended) A method of forming an optical device comprising the steps of:

 providing a substrate comprising a first electrode capable of injecting or accepting charge carriers of a first type;

 forming over the first electrode a first layer that is at least partially insoluble in a solvent by depositing a first semiconducting material that is free of cross-linkable vinyl or ethynyl groups and is, at the time of deposition, soluble in the solvent;

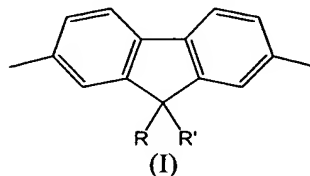
 forming a second layer in contact with the first layer and comprising a second semiconducting material by depositing a second semiconducting material from a solution in the solvent; and

 forming over the second layer a second electrode capable of injecting or accepting charge carriers of a second type; and

 subjecting the first layer to one or more of heat treatment, vacuum treatment and ambient drying treatment in order to render the first layer at least partially insoluble

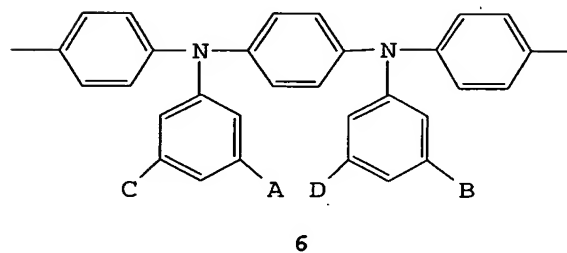
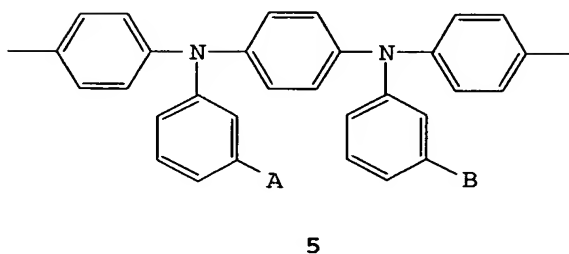
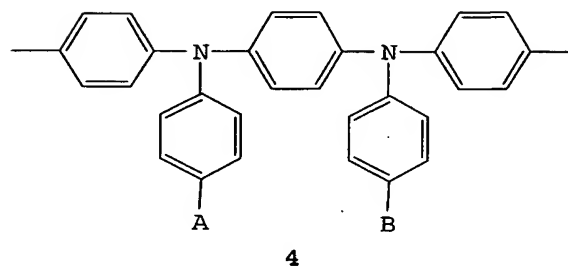
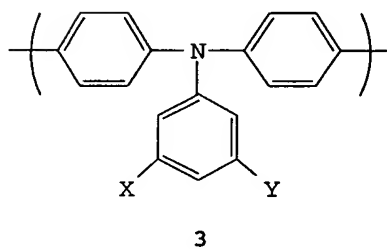
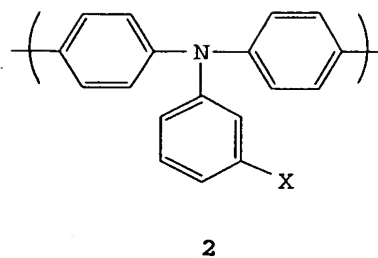
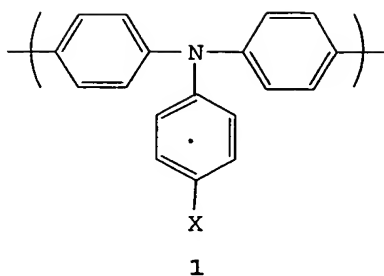
 ~~wherein the first layer is rendered at least partially insoluble by one or more of heat, vacuum and ambient drying treatment following deposition of the first semiconducting material.~~
2. (Original) A method according to claim 1 wherein at least one of the first and second semiconducting materials is a polymer.
3. (Presently Amended) A method according to claim 1 ~~or 2~~ comprising the step of heating the first layer prior to deposition of the second layer.
4. (Presently Amended) A method according to ~~any one of claims~~ claim 1 to 3 comprising ~~a step prior to forming the second layer of~~ washing the first layer with a washing solvent in which the first semiconducting material is soluble prior to forming the second layer.
5. (Presently Amended) A method according to ~~any preceding~~ claim 1 wherein the first layer is deposited from a solution in the solvent.

6. (Presently Amended) A method according to ~~any preceding~~ claim 1 wherein the solvent is an aromatic hydrocarbon.
7. (Original) A method according to claim 6 wherein the solvent is an alkylated benzene.
8. (Original) A method according to claim 7 wherein the solvent is toluene or xylene.
9. (Presently Amended) A method according to ~~any~~ claim 2 wherein the polymer is a polyfluorene comprising optionally substituted repeat units of formula (I):



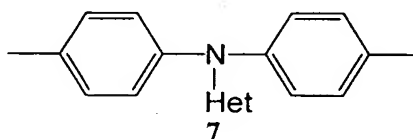
wherein R and R' are independently selected from hydrogen or optionally substituted alkyl, alkoxy, aryl, arylalkyl, heteroaryl and heteroarylalkyl, and at least one of R and R' is not hydrogen.

10. (Original) A method according to claim 9 wherein at least one of R and R' comprises an optionally substituted C₄-C₂₀ alkyl group.
11. (Presently Amended) A method according to ~~any preceding~~ claim 1 wherein the first electrode is capable of injecting holes and the second electrode is capable of injecting electrons.
12. (Presently Amended) A method according to claim 11 wherein the first semiconducting material is a polymer ~~comprises~~ comprising triarylamine repeat units.
13. (Original) A method according to claim 12 wherein the triarylamine repeat units are selected from optionally substituted repeat units of formulae 1-6:



wherein X, Y, A, B, C and D are independently selected from H or a substituent group.

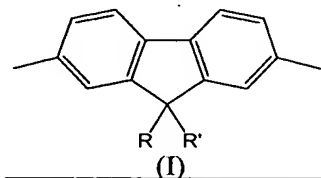
14. (Original) A method according to claim 13 wherein one or more of X, Y, A, B, C and D is independently selected from the group consisting of alkyl, aryl, perfluoroalkyl, thioalkyl, cyano, alkoxy, heteroaryl, alkylaryl and arylalkyl groups.
15. (Original) A method according to claim 12 wherein the triarylamine repeat unit is an optionally substituted repeat unit of formula 7:



wherein Het is a heteroaryl.

16. (Original) A method according to claim 15 wherein Het is 4-pyridyl.

17. (Presently Amended) A method according to ~~any preceding claim 1~~ wherein the first semiconducting material is a polymer comprising a 1:1 regular, alternating copolymer of a fluorene repeat unit as ~~defined in claim 9 or 10~~ of formula (I):



wherein R and R' are independently selected from hydrogen or optionally substituted alkyl, alkoxy, aryl, arylalkyl, heteroaryl and heteroarylalkyl, and at least one of R and R' is not hydrogen and a triarylamine repeat unit as ~~defined in any one of claims 12-16~~.

18. (Presently Amended) A method according to ~~any one of claims 11-17~~ claim 11 further comprising providing a wherein a layer of conductive organic material is ~~provided~~ between the first electrode and the first layer.
19. (Original) A method according to claim 18 wherein the layer of conductive organic material is PEDT / PSS.
20. (Presently Amended) A method according to ~~any preceding claim 1~~ wherein the first layer has a thickness of less than 20 nm.
21. (Presently Amended) A method according to claim 20 wherein the first layer has a thickness less than 10 nm, ~~preferably in the range 3-10 nm~~.
22. (Presently Amended) A method according to ~~any preceding claim 1~~ wherein the second semiconducting material is a polymer comprising a plurality of regions and ~~comprising including~~ at least two regions selected from the group consisting of a hole transporting region, an electron transporting region and an emissive region.
23. (Presently Amended) A method according to claim 22 wherein the second semiconducting material polymer comprises a hole transporting region, an electron transporting region and an emissive region.
24. (Canceled)
25. (Presently Amended) An optical device ~~preparable~~ prepared according to the method of ~~any one of claims 1-23~~ claim 1.
26. (Presently Amended) An organic electroluminescent display ~~preparable~~ prepared according to the method of ~~any one of claims 1-23~~ claim 1.
27. (Presently Amended) A blue light emitting electroluminescent display ~~preparable~~ prepared according to the method of ~~any one of claims 1-23~~ claim 1.

28. (Presently Amended) A white light emitting organic electroluminescent display ~~preparable~~ prepared according to the method of ~~any one of claims 1-23~~ claim 1.

Claims 29-38 (Canceled).

39. (Original) A method of forming an optical device comprising the steps of:

providing a substrate comprising a first electrode capable of injecting or accepting charge carriers of a first type;

forming over the first electrode a first layer that is at least partially insoluble in a solvent by depositing a first semiconducting material that is free of cross-linkable vinyl or ethynyl groups;

subjecting the first layer to heat treatment;

forming a second layer in contact with the first layer and comprising a second semiconducting polymer by depositing a second semiconducting material from a solution in the solvent; and

forming over the second layer a second electrode capable of injecting or accepting charge carriers of a second type.

40. (Presently Amended) A method of forming an optical device comprising the steps of:

providing a substrate comprising a first electrode capable of injecting or accepting charge carriers of a first type;

forming a first layer over the first electrode by depositing a first semiconducting polymer comprising fluorene repeat units, the first semiconducting polymer being free of cross-linkable vinyl or ethynyl groups and being, at the time of deposition, soluble in a solvent;

subjecting the first layer to one or more of heat treatment, vacuum treatment or ambient drying treatment ~~treatment~~;

forming a second layer in contact with the first layer and comprising a second semiconducting polymer by depositing a second semiconducting polymer from a solution in the solvent; and

forming over the second layer a second electrode capable of injecting or accepting charge carriers of a second type.